LOW ENERGY DOSE MONITORING OF IMPLANTER USING IMPLANTED WAFERS

ABSTRACT OF THE DISCLOSURE

A method for processing semiconductor wafers, e.g., silicon. The method includes providing a monitor wafer, which is made of a crystalline material. The method includes introducing a plurality of particles within a depth of the material, whereupon the plurality of particles cause the crystalline material to be in an amorphous state. The method also includes introducing a plurality of dopant particles into a selected depth of the crystalline material in the amorphous state using an implantation tool. The amorphous state traps the dopant particles. The method includes subjecting the monitor wafer including the plurality of particles and dopant particles into thermal anneal process to activate the dopant. The sheet resistivity is measured. The method operates the implantation tool using one or more production wafers if the dose of the dopant particles in the monitor water is within a tolerance of a specification limit.

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